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ABSTRACT OF THE DISCLOSURE

a An apparatus and method for combining NIR spectography  
with a combine for measuring major constituents of harvested  
grain in real time includes a <sup>monochromator</sup>~~monochrometer~~ having no moving  
a 5 optical parts. The <sup>monochromator</sup>~~monochrometer~~ includes a fixed  
diffraction grating and a photodiode collector comprised of a  
plurality of photodiodes. A radiation source irradiates a  
grain sample while a bundle of fiber optic strands transmits  
the reflected radiation to the diffraction grating. By  
10 analyzing the intensities and wavelengths of the reflected  
radiation at the photodiode collector, the presence and  
amount of major constituents of the harvested grain can be  
determined. The present invention may be used on a research  
combine along with the conventional instrumentation which  
15 measures the weight, moisture, and volume of grain harvested  
in a test plot.

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